

WHAT IS CLAIMED:

1. An article having nanoscale patterning, said article comprising:

a plurality of self assembled pillars from a constant volume of material rendered deformable, said pillars interconnected on a substrate by said material, said plurality of pillars having a height ranging from above 1 nm to below 1 μm .
2. The article of claim 1, wherein said height is in the range of about 100 nm to about 700 nm.
3. The article of claim 1, wherein said height is in the range of about 250 nm to about 550 nm.
4. The article of claim 1, wherein said self assembled pillar on the substrate has a diameter, said pillar height to pillar diameter ratio being in a range of about 0.1 to about 0.5.
5. The article of claim 1, wherein said plurality of self assembled pillars on the substrate are in a periodic array.
6. The article of claim 1, wherein said plurality of self assembled pillars on the substrate has a period of about 1 μm to about 10 μm .
7. The article of claim 1, wherein said plurality of self assembled pillars on the substrate has a boundary defined by a pattern on a mask used to form said plurality of pillars.

8. The article of claim 1, wherein said plurality of self assembled pillars on the substrate are merged to form a single mesa under a mask protrusion.

9. The article of claim 1, wherein said nanoscale patterning is substantially identical in lateral size as a mask used to form said nanoscale patterning.